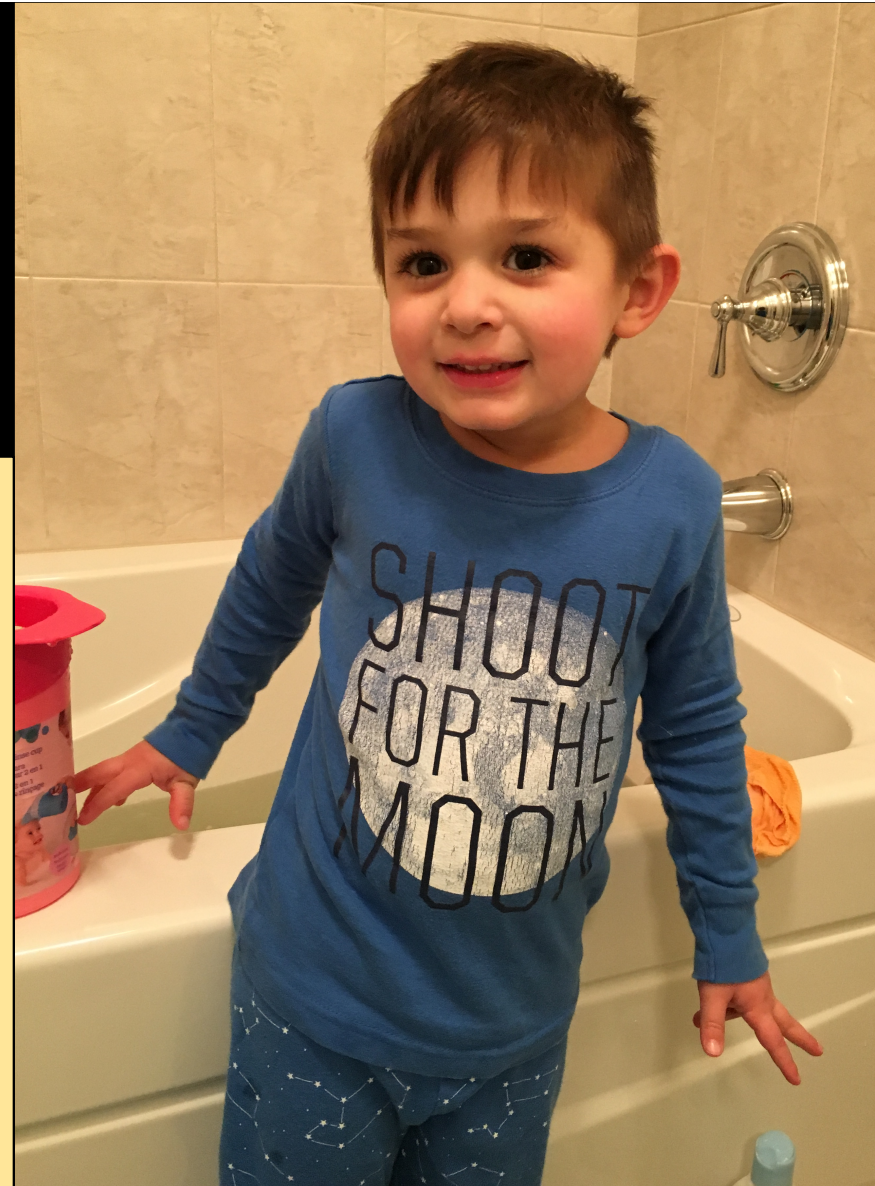


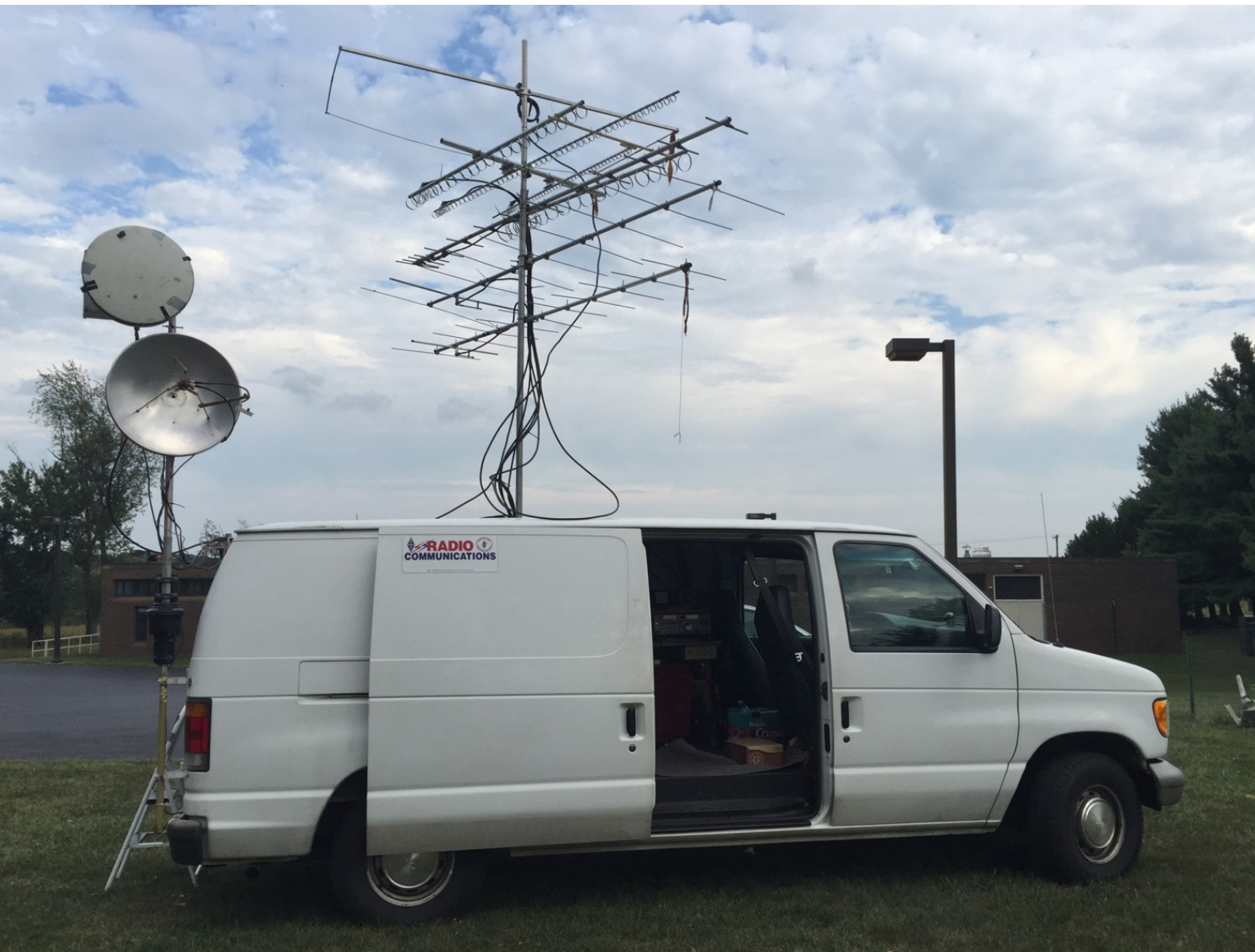
EME Today & Tomorrow

**Advances Making EME
Easier**

~~~~~  
**Rick Rosen K1DS  
EL96vm**

~~~~~  
EME Trenton 2024



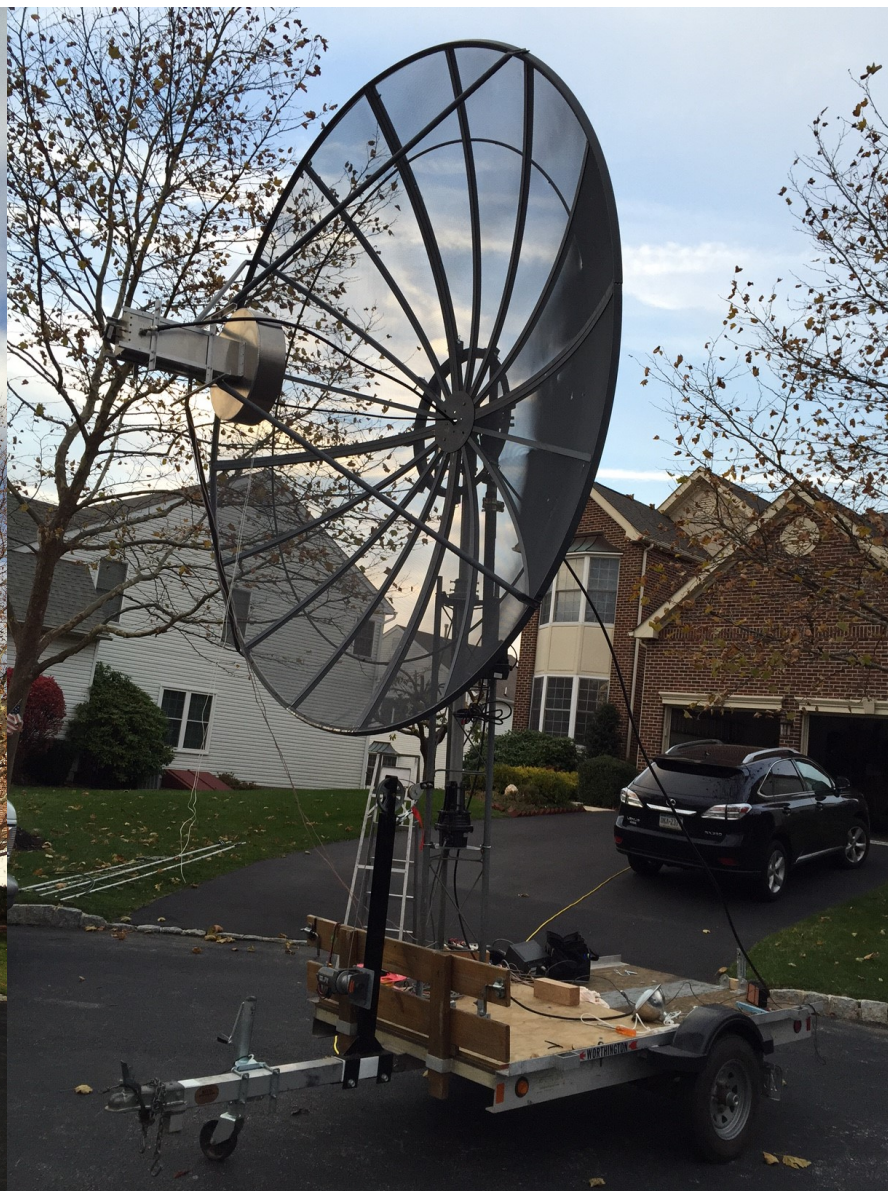


K1DS, Licensed since 1959
Introduced to VHF with a pair of 957 acorn tubes walkie from the 1945 ARRL Handbook.
Graduated to a Heathkit Twoer and Sonabuoy XMTR and Lafayette VHF Receiver for FM repeaters
Introduced to 222 and 432 by K1MON in Boston 1972
Joined AMSAT Life Member in late '70's operating modes A,B & J. Was RI Coordinator and worked with N4HY
Charter member of NEWS and started roving. Moved to Philadelphia area and joined the Packrats and built up this rover 50-24GHz + LASER.
Now in a condo in Boynton Beach and sneaking up temporary antennas.



Curiosity about EME and NC1I came to RI and operated 432 I was unimpressed. Met K2UYH and K1JT and I was really fascinated. A "FREE" 3m dish became available as well as four 2m Yagis from the boneyard of DEMI in Frenchtown, NJ. My first 2m CW EME QSO attempt was a partial with W5UN, the second with SV1BTR was a success, as were other skeds. Used TS2000x, a single long Yagi, TE SSPA 300W with built-in preamp at moonrise.





Invested a lot of time and \$\$ into the “FREE” dish and had the satisfaction of dozens of CW EME QSOs around the world. Traveled with both K2UYH and K1JT to all of the 432&Up EME conferences since the intro of WSJT. Have operated EME on 2m, 1.25m, 70cm, 33cm, 23cm, 13cm. Author of the ARRL EME Contest results ‘color commentary’ for past several years

Al Katz, K2UYH
operating
portable in
Aruba during
the third
weekend of the
ARRL EME
contest
~ 2009



Developments Which Enhance EME

- EME Beacons on 1296MHz, 10.3GHz, 24GHz
- 10Mhz disciplined oscillators
- Microwave solid state power devices
- Pallet SSPAs from the analog to digital TV conversion
- Digital communications and the newest mode: Q65
- Activation of large dishes
- Dedicated loggers N0UK, HB9Q , ON4KST
- Dx-peditions dedicated to EME
- Portable state EME adventures
- Commercial suppliers
- PA0PLY band operator lists



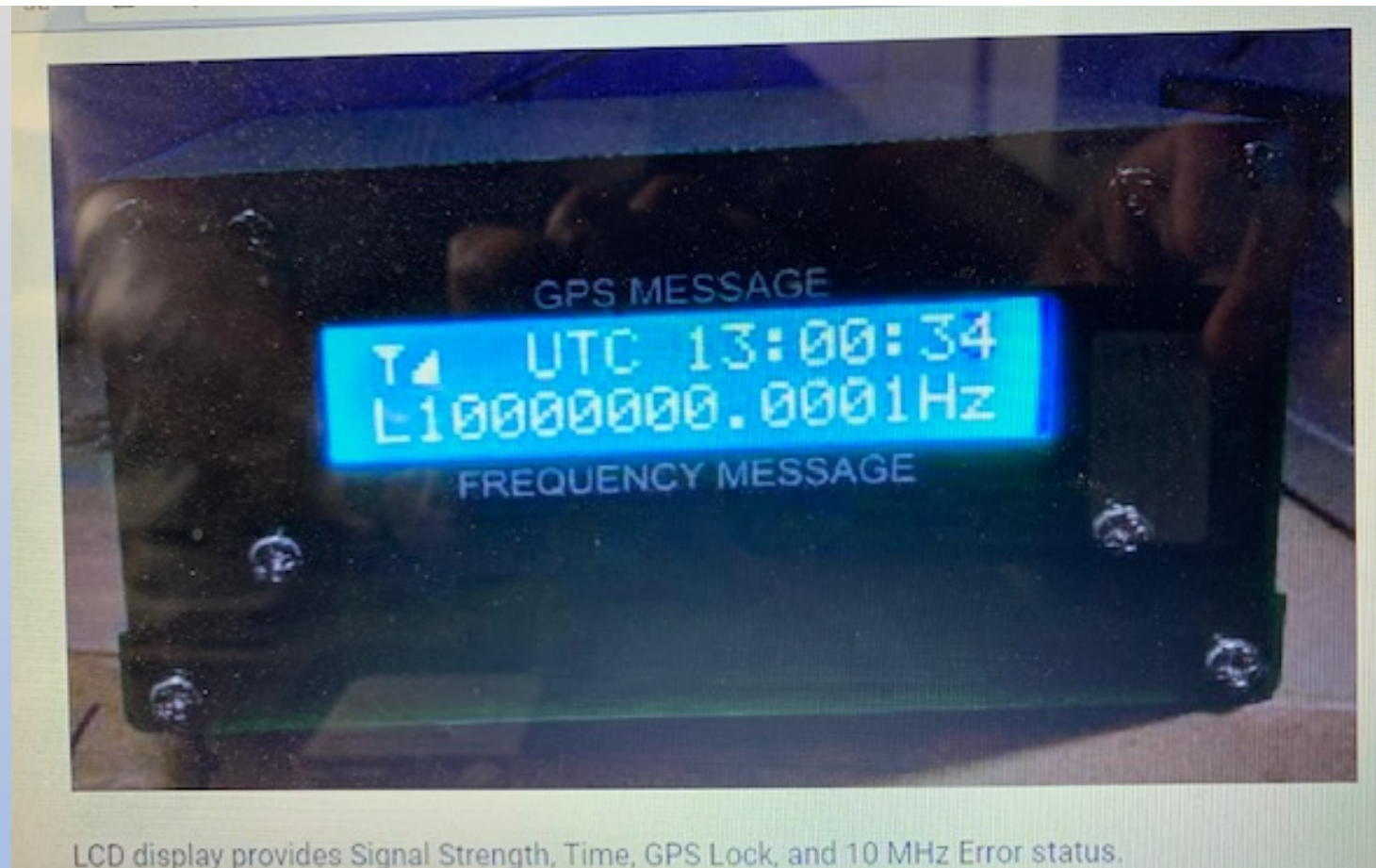


DL0SHF is located in Kiel-Ronne, Germany (JO54CG), and is part of a complex of antennas associated with The University of Kiel and includes antennas used for education and radio astronomy, as well as Amateur microwave tropo and EME

DL0SHF 10GHz EME Beacon

- Dish diameter - 7.2m (23.5ft)
- Feed system - Cassegrain
- 3dB beamwidth - around 0.3 degrees
- Antenna gain - 54.7dBi
- Power - around 40W from a solid state amplifier is "normal". Can be lower of higher power at times
- Tx Frequency - 10368.025000 - GPS referenced
- Polarization - Vertical (the standard in Europe)
- FSK CW and (usually) Q65-60E
- Locator .JO54CG

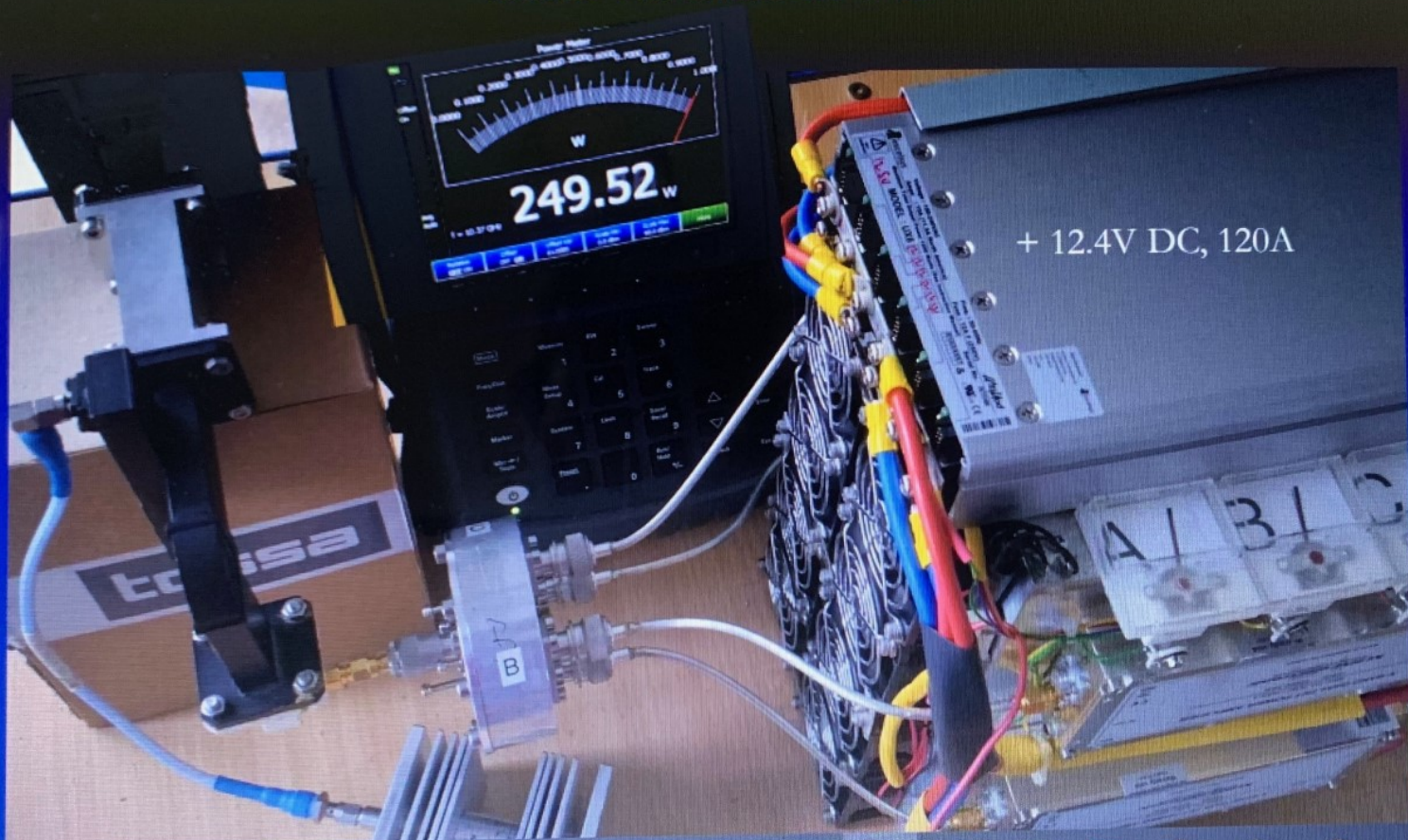


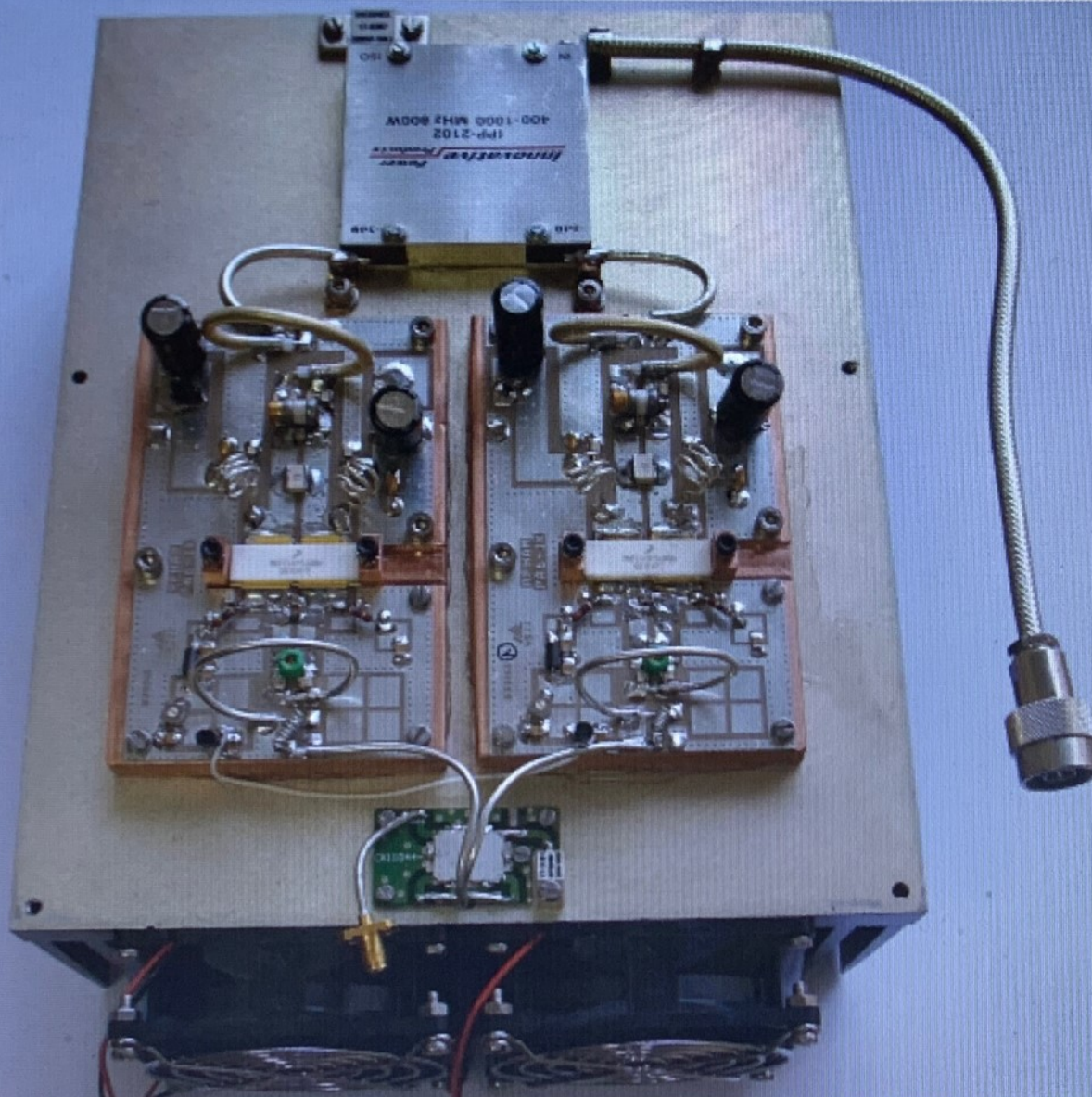


The **GPSDO (GPS Disciplined Oscillator)** uses **GPS signals to control the 10 MHz OCXO (Oven Controlled Crystal Oscillator)**, and to provide a accurate GPS controlled 1 PPS (Pulse Per Second) output. A unique software algorithm filters and processes the GPS timing signal to improve the overall timing and frequency accuracy.

Measurements with 4 Kuhne

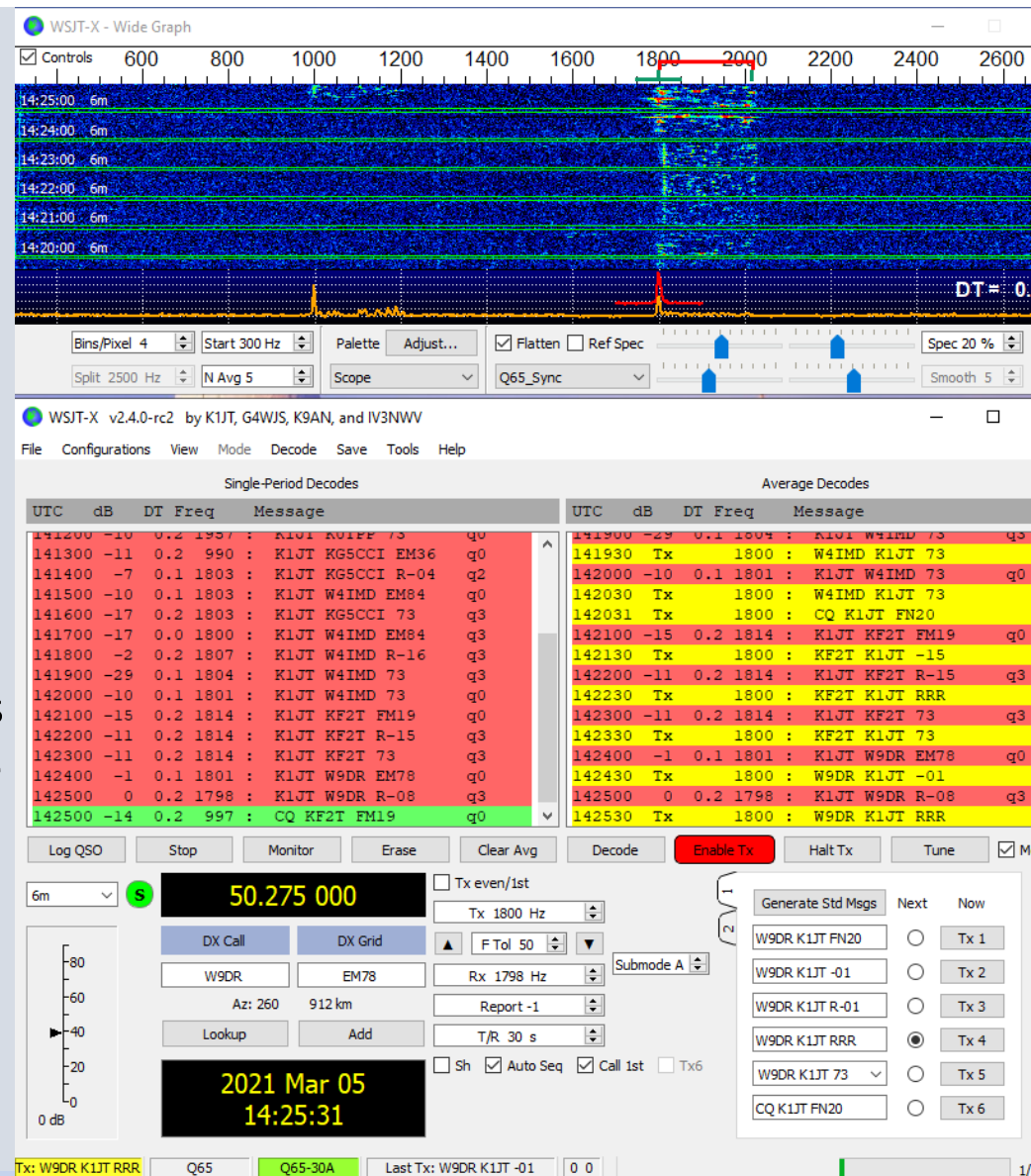
MKU PA 3cm-60W A



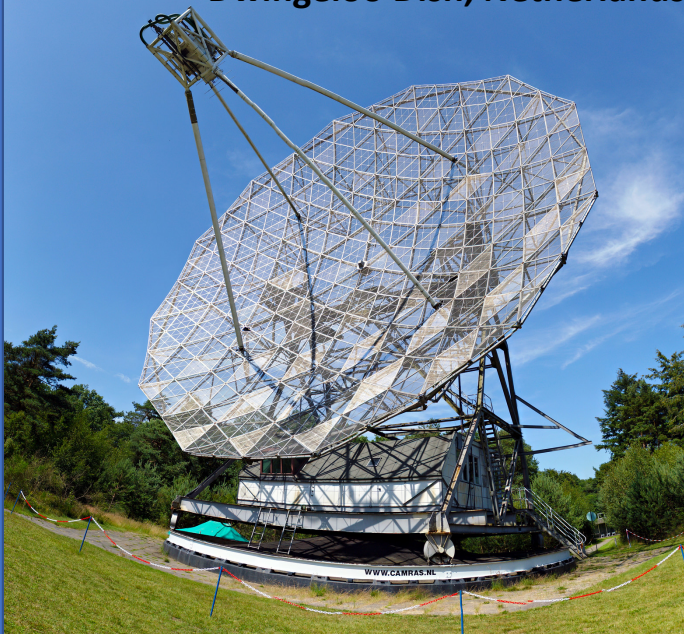


F5FLN
432 MHz SSPA
1000W

The Q65 decoder takes advantage of a priori (AP) information such as the encoded forms of one's own callsign and the message word CQ. As a QSO progresses AP information increases to include the callsign of the station being worked and perhaps his/her 4-digit grid locator. The decoder takes advantage of whatever AP information is currently available. For Q65 EME QSOs on the microwave bands, some operators use short-form messages consisting of a single tone. This also enables the generation of a single tone at 1000Hz by selecting Tx6, to assist in finding signals initially. The box labeled Tx6 switches the Tx6 message from 1000Hz to 1250Hz to indicate to the other station that you are ready to receive messages. These short-form messages are not decoded automatically, and auto-sequencing will not respond to them. You must recognize and interpret them yourself.



Dwingeloo Dish, Netherlands



Project Diana, New Jersey



Weston, MA





WSJT EME - 1.

PingJockey Central	WSJT Terrestrial	WSJT EME - 2	CW EME	Who's Earwiggling?
Distance/Bearing Locator	Refresh	Look back	Update User details	Refreshed 18Jun 18:52

Due to recent abuse of this system, you will be unable to post any messages until you complete the [User Details](#) page
Exchanging any contact details on here [before](#) you're complete, invalidates the contact, and, if it's not WSJT via Moonbounce it doesn't belong here!

Enter your message here

```
DDMM  UTC
18Jun 18:51 HI ALLE ===== {EB5HRZ/4X9H Mario xx IM99sm }
18Jun 18:50 S52LM Milos, 4-dk7zb 500w ===== {UA1ASA Aleks xx KO48gh }
18Jun 18:49 S52LM Milos, -17fb ===== {UA1ASA Aleks xx KO48gh }
18Jun 18:49 UA1ASA Aleks , your antenna and power ? ===== {S52LM/4X14HV/1K Milos xx JN65tx }
18Jun 18:47 S52LM Milos, tnx ===== {UA1ASA Aleks xx KO48gh }
18Jun 18:46 UA1ASA Aleks GE, 128 77 0 1845 2.8 -19 # CQ UA1ASA KO48 1 179 26 H ===== {S52LM/4X14HV/1K Milos xx JN65tx }
18Jun 18:43 GE all CQ 2st 128 10 min ===== {UA1ASA Aleks xx KO48gh }
18Jun 16:18 Stop CQ .132 ===== {OM4CW/1X18H/750 Vlado xx JN88un }
18Jun 16:10 == CQ CQ .132 JT65B 1st for a while == ===== {OM4CW/1X18H/750 Vlado xx JN88un }
18Jun 16:07 =====Stop CQ on .133===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 16:07 OM4CW Noise today Vlado ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 16:06 I3MEK Oggi rumore sul mare !! ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 16:05 TK5JJ Jean that's not my signal, I calling you second nw ===== {OM4CW/1X18H/750 Vlado xx JN88un }
18Jun 16:05 I3MEK Ciao Mario .. Grazie RPT ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 16:04 Ciao Jean :133 172 3 1602 3.0 -22 # CQ TK5JJ JN42 ===== {I3MEK/4X13HV/K Mario xx JN55sj }
18Jun 16:02 OM4CW I see your trace ... ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 16:01 TK5JJ Jean see weak trace but no decode ===== {OM4CW/1X18H/750 Vlado xx JN88un }
18Jun 15:59 OM4CW HI Vlado ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 15:57 OM4CW OK ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 15:56 TK5JJ Hi Jean pse continue I lsn for you ===== {OM4CW/1X18H/750 Vlado xx JN88un }
18Jun 15:52 =====Stop CQ 144.133===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 15:43 =====CQ CQ 15T 144.133 JT65B===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 15:40 UA9YJM Hi Sergey ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 15:34 TK5JJ Jean-Jacques ,HI! ===== {UA9YJM/4X10H300 Sergey xx NO13vm }
18Jun 15:32 Hi all ===== {TK5JJ/2X12H/K Jeanj xx JN42rh }
18Jun 08:10 ZL1HD Peter thanks for moral support ===== {W6UC Phil CA DM05ie }
```


LiveCQ

By PA9RX
144 432 1296

Latest 25 spots



Menu

- All spots
- Latest spots
- Who is online
- Add your CQ spot here
- User config
- Contest style
- Simple design all spots
- Mobile
- → QO-100

Search

 🔍

Freq	Date	Time	Signal	DF	DT		Call	Loc	Pol	Mode	Spotter
144.128	18-Jun	1847	-21	+071	2.7	CQ	UA1ASA	KO48	2	JT65b	S52LM
144.133	18-Jun	1839	-21	+017	2.7	CQ	UA1ASA	KO48	1	JT65b	S52LM
144.115	17-Jun	2134	-18	+292	2.8	CQ	EB5HRZ	IM99	174	JT65b	S52LM
144.111	17-Jun	2134	-21	- 431	2.8	CQ	F4HBY	IN97	2	JT65b	S52LM
144.132	17-Jun	2126	-22	- 419	2.7	CQ	F4HBY	IN97	2	JT65b	S52LM
144.122	16-Jun	1736	-26	+248	2.6	CQ	EB5EA	IM99	H	JT65b	UA3PTW
144.120	16-Jun	1647	-13	- 285	2.6	CQ	I2FAK	JN45	H	JT65b	TK5JJ
144.120	16-Jun	1647	-15	- 051	2.8	CQ	I2FAK	JN45	87	JT65b	G8EOH
144.120	16-Jun	1647	-10	+013	2.6	CQ	I2FAK	JN45	H	JT65b	UA3PTW
144.130	16-Jun	1618	-25	+180	2.8	CQ	OM3BY	JN99	97	JT65b	G8EOH
144.116	16-Jun	1616	-16	+020	2.4	CQ	IK1FJI	JN44	H	JT65b	UA3PTW
144.116	16-Jun	1616	-23	- 044	2.6	CQ	IK1FJI	JN44	34	JT65b	G8EOH
144.138	16-Jun	1610	-24	+442	3.0	CQ	IK2DDR	JN55	148	JT65b	G8EOH
144.139	16-Jun	1610	-14	- 498	2.8	CQ	IK2DDR	JN55	H	JT65b	UA3PTW
144.138	16-Jun	1606	-16	+493	2.9	CQ	IK2DDR	JN55	H	JT65b	UA3PTW
144.117	15-Jun	2205	-23	+248	0.1	CQ	9A2HV	JN75	H	JT65b	R1CCX
144.122	15-Jun	2157	-20	+245	-1.6	CQ	OK1PDQ	JO60	H	JT65b	R1CCX
144.122	15-Jun	2155	-22	+243	4.5	CQ	DL1BAB	JO42	H	JT65b	R1CCX
144.119	15-Jun	2141	-23	+240	4.5	CQ	F6HBP	JN25	H	JT65b	R1CCX
144.122	15-Jun	2143	-25	+025	2.8	CQ	WQ5S	EM13	84	JT65b	S52LM
144.120	15-Jun	2130	-26	+243	-3.4	CQ	HG9VHF	KN08	H	JT65b	R1CCX

Hosting Jun 2024
sponsored by PA9RX

A website like this with
huge databases and trafic
make cost for hosting. I
got a new bill for 2024, we
are open for donations for
2024

[Donate](#)

Made by PA9RX, thanks to
PE1LWT, PA3FPQ all
spotters en sponsors.
MAP65 users are
welcome!, send email to
PA9RX

Use of data is not Allowed
without permission!

UTC	CALL/NAME	EME (all bands/modes) MESSAGES High lat. AU warning	UTC SPOTTER ORG	DX	INFO	K1DS	FN0RE	Red
02:26:56	NN7J Dan	Anybody know how to program M2 RC2800P-A	0106 py5hc	144174.0 PJACR	-12 gq54m	NN7J	CN55SF	Dan
02:12:52	S57RR Bert 4X6 Elev.	CQ EME 50193 2nd 1500 hz Q65	0010 ur5po	144300.0 UJWSS	qg qg canoo	DN2NE	JO50AL	US 2nd C
02:12:44	JA9SJI Mitsuru 4X6 EL	You TOO!	2356 kp4nt	144300.0 KJ74	weak signal from SA	DL8YHR	JO41GV	Frank
02:12:13	S57RR Bert 4X6 Elev.	(JA9SJI) Fb easy qso, 73 and have a nice weekend!	2280 ur5hc	144300.0 UJWSS	qg qg canoo	F100Q	IN96GQ	Jim 1x3
02:11:00	JA9SJI Mitsuru 4X6 EL	0209 -21 2.6 1512 : JA9SJI S57RR 73 It was your Vest	2208 s50ta	144300.0 ON4BCV	MSK144 +1 dB replaying U	Q4BWP	JO02FH	Fred
02:10:35	JA9SJI Mitsuru 4X6 EL	(S57RR) Thanks Also, VY good Sig	2159 yt3gl	144300.0 S50TA	MSK144 +0 dB CQ	Q4FUF	JO01ON	Keith
02:10:00	S57RR Bert 4X6 Elev.	0208 -23 2.9 920 : S57RR JA9SJI RR73 q3	2144 d6ag	144300.0 OM3WC	MSK144 +10 dB	Q8BCG	JO70RK	Peter 4x
02:09:50	S57RR Bert 4X6 Elev.	(JA9SJI) Tnx for another fb eme qso Mitsuru-san	2138 ky5o	144300.0 JM7OKW		GD0TEP	JO74SD	Andy
02:07:10	JA9SJI Mitsuru 4X6 EL	I have copy every SQ your Sig Bert	2130 yt3gl	144300.0 DJ6AG	MSK144 -4 dB	GM4WJA	JO57MN	John
02:01:08	JA9SJI Mitsuru 4X6 EL	Thanks	2105 zw6on	144174.0 UT5EL/A	FT8 +0 dB 1712 Hz	HA2NP	JN97SG	Robert
02:00:39	S57RR Bert 4X6 Elev.	(JA9SJI) GM Mitsuru RR 182	2102 ur5ur	144175.0 US4CG	Q65 TNX TR QSO	J3VJW	JN55AM	Walter
01:59:57	JA9SJI Mitsuru 4X6 EL	(S57RR) Bert 193 has QRM on SSB HW abt QSY 50 182?	2046 ur7em	144173.0 OK1UM	tnx for qso 173	JA9SJI	PM86PP	Mitsuru
01:46:05	S57RR Bert 4X6 Elev.	CQ EME 50193 2nd 1500 hz Q65	2044 d6fp	144173.0 DH8BQA	tnx for qso 173	JO1TSG	OM95AC	Kazu 4x
01:44:23	S57RR Bert 4X6 Elev.	(VK5AYD) GM David, time for try ur MS tdy ?	2041 d6fp	144173.0 DL2NEQ	tnx for qso 173	JO1LVZ	PM85RT	Hall
00:26:20	ZL1RS Bob 5/5/5	(YB2MDU) GM Bintl Will You be QRV later 02:00 to	2037 d6fp	144173.0 JO3AZ	tnx for qso 173	KQZJ	FN13UB	John 1x3
			2026 dh8bqa	144174.0 JO3AZ	JN65<TR>JO73ce bnd	K4MY	EM74RE	Rob
			2021 ur5ur	144174.0 UA6LOZ	TNX QSO<TR> FT8	K4RX	EM70UE	Terry
			2019 h4rlal	144360.0 PA0V	TNX QdB ONLY 100W 4 E Y 4M UP	K6EME	OM96DK	Matt 1x5
			2017 em5o	144174.0 RG4D	FT8 -24 dB	K9ND	FN104M	Will
			2017 ur5log	144174.0 UA4AOL	FT8	KJW	EN53QB	Dave 4x
			2014 ur5hr	144174.0 UT1EI	FT8 -14 dB 636 Hz cq	KL7HBK	BO49ET	John
			2012 ur5hr	144174.0 US4EK	KN69TA<->KN67UX FT8	KU5Y	EN61UV	Ken
			2008 em5o	144174.0 RG4D	FT8 -19 dB	LAVFA	KQ40CK	Olav 6m
			2010 ur5hr	144174.0 UR5QS	KN69TA<->KN7UG FT8	LZ2OC	KH23JG	Vasco4
			2010 ur5ur	144174.0 EU1AJ	<TR> FT8 -18 dB 1367 Hz	N6JV	CM98JJ	Norm 7L
			2005 em5o	144174.0 RX4CQ	FT8 -14 dB	N7NW	CM87QF	Hal 4X6
			2005 ur5hr	144174.0 EU1AJ	KN69TA<->KO33SV FT8	N8RR	EM96CG	Chas
			1959 ur5log	144174.0 UR5HVR	FT8 -17 dB 1375 Hz bnd	N9RW	EN65KZ	Tim
			1958 ur5ur	144174.0 RM5O	TNX QSO <TR> FT8 1940 Hz	OG2M	KP21TD	Peris
			1957 em5o	144174.0 UT9UR	FT8 -11 dB	OH2BU	KP20FB	Jan
						OH6MW	KP20IS	Ari
						S57RR	JN65UM	Bert 4X6
						SP7VC	JO92DE	Mek

ON4KST Chat room

ON4KST Chat room

144 432 1296 23xx

@call write your message here...

UTC CQ 1296.065 1st 2nd Q65--60C 2nd per search...

18:56	qrv test	@ IZ4VSS	Luca	
18:41	@DK3WG: TNX will try	@ OK1DFC	Zdenek	
18:13	I can be qrv at half hour	@ 4X1AJ	Andrey	
18:13	@OK1DFC: Hi,Zdenek! Would you like to try 1268/1296 split?	@ 4X1AJ	Andrey	
18:12	Hi all!	@ 4X1AJ	Andrey	
18:08	stop cq	@ DJ7FJ	Joe	
17:53	***** CQ 1296.065 1st Q65-60Ccfom 1500Hz *****	@ DJ7FJ	Joe	
17:23	@OK1DFC: ge, I got Yasers QSL via EA5KB.....fer 70cm.....	@ DK3WG	Jurg	
17:17	@9K2YM: ge Yaser, can we try 29./30. June on 23cm ?	@ DK3WG	Jurg	
17:14	@9K2YM: Yaser, I do not know how to deliver QSL to you. I will pay via PayPal post cost and send me your QSL please. I am missing that in DXCC collection.	@ OK1DFC	Zdenek	
17:10	@OK1DFC: Hello sorry no received	@ 9K2YM	Yaser	
16:18	@9K2YM: Hi Yaser, did you received my QSL? Already send to you 3 of my.	@ OK1DFC	Zdenek	
11:19	@DK3WG: Im not always in front of the logger but I will keep checking back	@ VK3NFI	Dean	
11:18	@DK3WG: No prob I will be around for a while yet	@ VK3NFI	Dean	
10:58	@VK3NFI: ga, we can try when moon in better positions.....need more Elevation (trees).	@ DK3WG	Jurg	
06:00	Stopped CQ on 065.	@ KB2SA	Bill	
05:51	***** CQ 1296.065 1st Q65-30B CFOM @ 1500 hz *****	@ KB2SA	Bill	
01:41	Stopped CO on 065. ORV.	@ KB2SA	Bill	

Icons for various functions: location, chat, info, user, and share.

Who is online HB9Q eme

<input type="checkbox"/>	<input type="checkbox"/>	K1DS (ME)	
<input type="checkbox"/>	<input type="checkbox"/>	@ 9H1BN - Mark	
<input type="checkbox"/>	<input type="checkbox"/>	@ 9K2YM - Yaser	
<input type="checkbox"/>	<input type="checkbox"/>	@ DJ7FJ - Joe	
<input type="checkbox"/>	<input type="checkbox"/>	@ DK0TE - Hardy	
<input type="checkbox"/>	<input type="checkbox"/>	@ DK3WG - Jurg	
<input type="checkbox"/>	<input type="checkbox"/>	@ F4DWB - Stéphane	
<input type="checkbox"/>	<input type="checkbox"/>	@ IQ2DB - A.Volta EME team	
<input type="checkbox"/>	<input type="checkbox"/>	@ IZ4VSS - Luca	
<input type="checkbox"/>	<input type="checkbox"/>	@ K6RA - Bruce	
<input type="checkbox"/>	<input type="checkbox"/>	@ LZ4FR - KRASSY	
<input type="checkbox"/>	<input type="checkbox"/>	@ OK1DFC - Zdenek	
<input type="checkbox"/>	<input type="checkbox"/>	@ OM4XA - Fero	
<input type="checkbox"/>	<input type="checkbox"/>	@ PA1EMT - Rob	
<input type="checkbox"/>	<input type="checkbox"/>	@ RJ3DC - Vitaliy	
<input type="checkbox"/>	<input type="checkbox"/>	@ ZS4TX - Bernie	
last seen on logger >1h			
<input type="checkbox"/>	<input type="checkbox"/>	@ DL4DTU - Norbert	
<input type="checkbox"/>	<input type="checkbox"/>	@ G1YLB - Steve	
<input type="checkbox"/>	<input type="checkbox"/>	@ G4YTL - David	
<input type="checkbox"/>	<input type="checkbox"/>	@ SP5GDM - Jan	



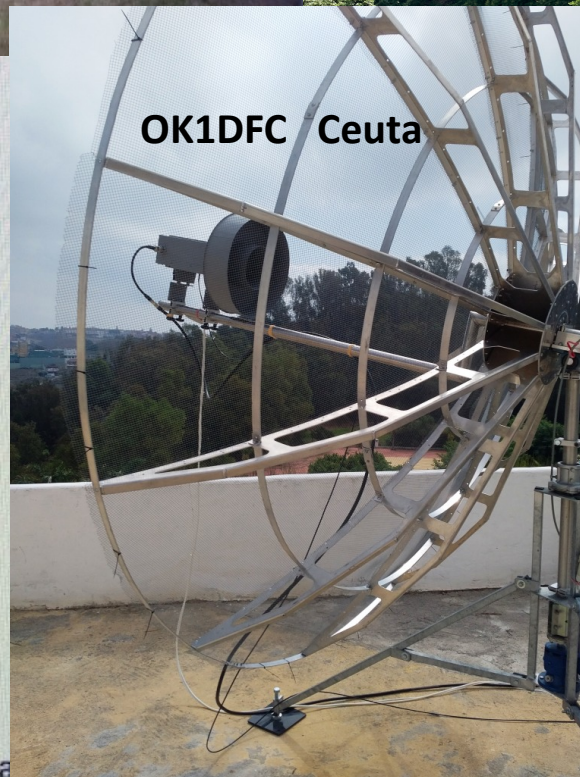
DL1YMK
Aland Islands



HB9Q Grid
DXpedition
HB9COG, Sam



Giulio at TX7EME on Rangiroa Atoll Polynesia



OK1DFC Ceuta



FO/W7GJ

Rimatara, Austral Islands, French Polynesia
Gridsquare BG37oi, IOTA OC-050, CQ DX Zone 32, ITU Zone 63



Gene KB7Q Portable EME



DOWN EAST MICROWAVE Live Oak, FL



W6PQL, California



23 cm Transverter

Kuhne GmbH, Germany



PE1RKI, Netherlands

<i>Call</i>	<i>Locator</i>	<i>Firstname</i>	<i>Antenna</i>	<i>Power</i>	<i>E-mail</i>	<i>HAM - site</i>
JS6UJS	PL24CK	Ochial	3.6m dish	250	ja8szw@moera.net	
K0PRT	DM88KJ	Gary	18.3m dish	150	wa2jqz@arrl.net	
K0YW	DM67ED	Bruce	9.1m dish	500	k0yw@frontier.net	
→ K1DS	EL96VM	Rick	2.4m dish	275	rick1ds@hotmail.com	
K1EEP	FN33SU	Emily/Frank	2.4m dish	425	epotts@gmail.com	
K1JT	FN20QG	Joe	8m dish	500		
K2BLA	EL99IA	Al		0	tubadoc@cfl.rr.com	
K2UYH	FN20QG	Al	28ft dish	400	alkatz@tcnj.edu;a.katz@ieee.org	
K3CB	FM18VR	Owen		0	k3cb@earthlink.net	http://k3cb.com
K3WM	FN00EN	Wayne	4.5m dish	600	k3wm@verizon.net	
K4EME	FM08KF	Cowles	3m dish	400	candrus@mgwnet.com	http://www.mgwnet.com/~candrus/
K4OP	EM77AT	John		0		
K4QF	EM64WU	Ben	3.5m dish	250	LoWeb@esp-inc.net	
K5DN	EL19AW	Bob	4m dish	400	k5dn.bob@gmail.com	
K5DOG	EM00XI	Steve	3.6m dish	150	steve@k5dog.com	
K5GW	EM13UF	Gerald	6.9m dish	1500	texasrf@aol.com	
K5JL	EM15	Jay G.	8.5m dish	1500	k5jl@att.net	
K5LA	DM61TV	Floyd	3m dish	150	fchowning@outlook.com	
K5PJR	EM37FA	Tony	5m dish	300	k5pjr@centurytel.net	
K5QE	EM31CJ	Marshall	4.5m dish	500	k5QE@k5qe.com	http://www.k5qe.com
K5SO	DM66XW	Joe	8.6m dish	800	k5so@valornet.com	http://www.k5so.com
K5WO	DM65PC	Bob	1.5m dish	250	bobkmak@gmail.com	
K6FOD	DM04WC	Frank	1.8m dish	140	eme@inkbox.net	
→ K6JEY	DM03WT	Doug	2.3m dish	300	drzarkof56@yahoo.com	
K6MG	CM87WJ	Gary	8.5m dish	500	ad6fp@lbachs.com	

PA0PLY compiles a list of active EME stations for bands 432 & Up. This is one of 27 pages of the 1296 MHz EME list

<http://k3cb.com>

<http://www.mgwnet.com/~candrus/>

<http://www.k5qe.com>

<http://www.k5so.com>

K1DS EME in a CCR community Don't ask, don't tell

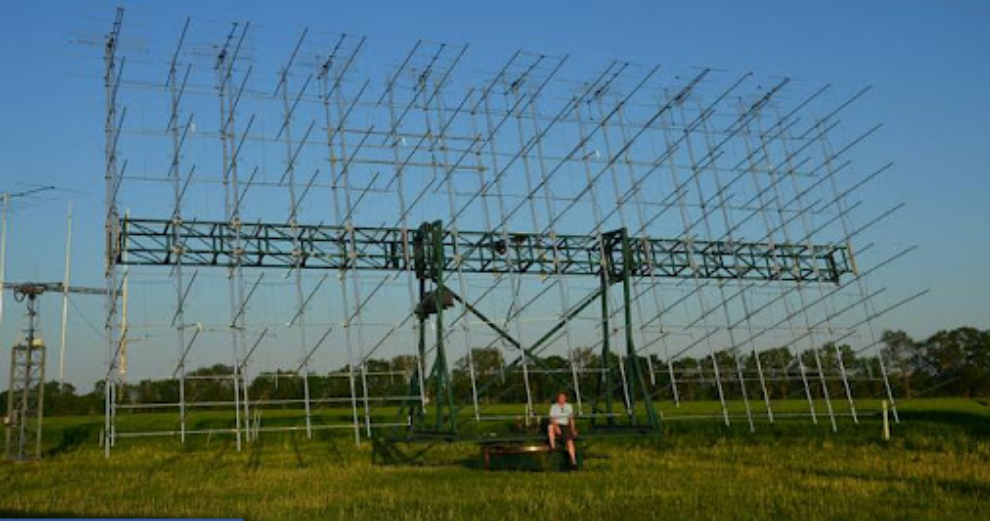


TS2000X
TE 350W 144 SSPA
TE 180W 432 SSPA
W6PQL 500W 432 SSPA
PE1RKI 270W 1296 SSPA



3 WL 144 Yagi
5 WL 432 Yagi
2.4m 1296 W2HRO Dish-Patch feed

Bernd DL7APV 128x 11 element 432MHz Yagis



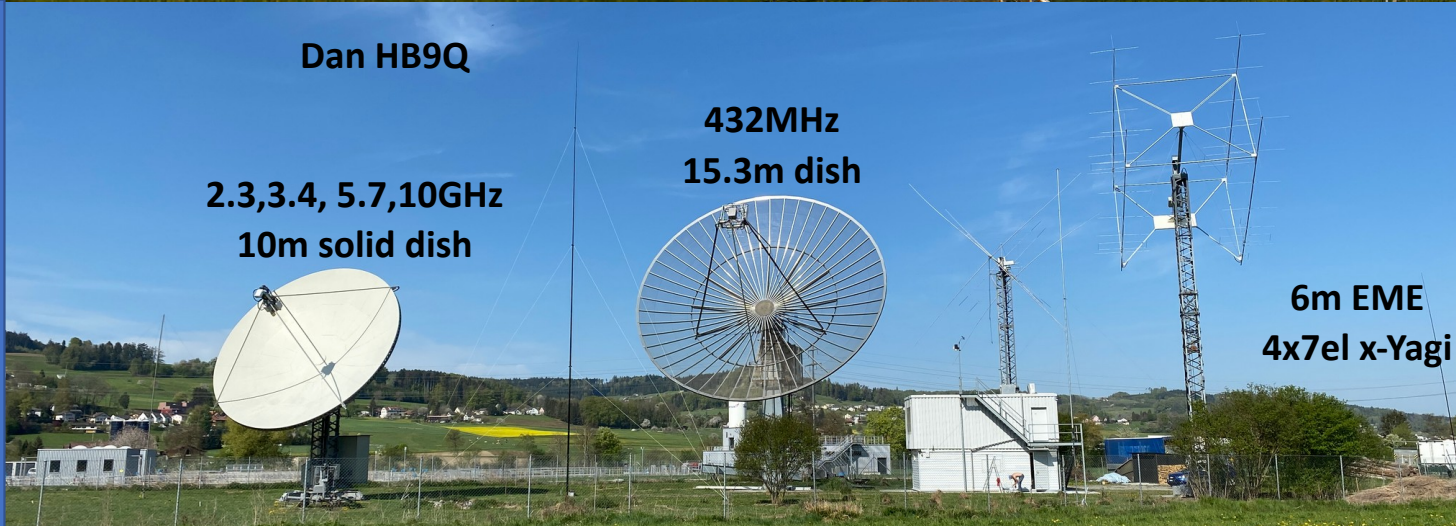
Frank NC1I 48 x 14 Element 432MHz Yagis



**You can
work any of
these
stations
using 432
EME at
moonrise,
even
without
elevation**

Dan HB9Q

**2.3,3.4, 5.7,10GHz
10m solid dish**



**432MHz
15.3m dish**



**6m EME
4x7el x-Yagi**





**Have you been on
the moon? If not,
when will you try?**

**Questions and
Comments**

**73,
Rick K1DS**